

(12) UK Patent Application (19) GB (11) 2 370 772 (13) A

(43) Date of Printing by UK Office 10.07.2002

(21) Application No 0207118.1	(51) INT CL ⁷ A61K 39/07 // A61K 39/40 , A61P 31/04 , C07K 16/12
(22) Date of Filing 08.09.2000	(52) UK CL (Edition T) A5B BAA B105 B134 B137 C6F FE FF F101 C6Y Y116 U1S S2419
(30) Priority Data (31) 9911384 (32) 10.09.1999 (33) FR	(56) Documents Cited by ISA EP 0739981 A WO 92/19720 A WPI Abstract No 2000-084616 & RU 2115433 C (MICROBIOLOGY RES INST) Microbial Pathgenesis (1988) Vol 5(2), pgs 127-140; Welkos & Friedlander Vaccine (1991), Vol 9(8), pgs 533-539, Turnbull Journal of Biotechnology (1996) Vol 44(1), pgs 155-160; Stepanov et al Journal of Hygiene, Epidemiology, Microbiology and Immunology (1991) Vol 35(1), pgs 83-91; Abalakin et al Zhurnal Mikrobiologii, Epidemiologii i Immunologii (1990), no 5, pgs 72-75; Abalakin et al
(86) International Application Data PCT/FR00/02494 Fr 08.09.2000	(58) Field of Search by ISA INT CL ⁷ A61K , C07K , C12N , C12R EPO-Internal, WPI Data, BIOSIS, MEDLINE
(87) International Publication Data WO01/19395 Fr 22.03.2001	
(71) Applicant(s) Institut Pasteur (Incorporated in France) 25-28 rue du Docteur Roux, 75724 Paris Cedex 15, France Centre National de la Recherche Scientifique (CNRS) (Incorporated in France) 3-5 rue Michel-Ange, 75794 Paris Cedex 16, France	
(72) and (74) continued overleaf	

(54) Abstract Title
Acellular immunogenic compositions and acellular vaccine compositions against bacillus anthracis

(57) The invention concerns an acellular immunogenic or vaccine composition for producing antibodies against *Bacillus anthracis* comprising a protective antigen (PA) and killed and optionally purified spores, obtained from mutating strains of *Bacillus anthracis* and their uses.

GB 2 370 772 A

(72) Inventor(s)

Michèle Mock

(74) Agent and/or Address for Service

Mathys & Squire

**100 Grays Inn Road, LONDON, WC1X 8AL,
United Kingdom**